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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,778

01/26/2004

Peter Donald Mason

DN2003032

9739

27280

7590

08/16/2006

THE GOODYEAR TIRE & RUBBER COMPANY  
INTELLECTUAL PROPERTY DEPARTMENT 823  
1144 EAST MARKET STREET  
AKRON, OH 44316-0001

EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/764,778

**Applicant(s)**

MASON ET AL.

**Examiner**

Geoffrey L. Knable

**Art Unit**

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 5,10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9 and 12-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1-26-04; 6-7-04</u> . | 6) <input type="checkbox"/> Other: ____.  |

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-9 and 12-19, drawn to a method for manufacturing a curved hose, classified in class 156, subclass 149.
  - II. Claims 10-11, drawn to a curved hose, classified in class 428, subclass 34.1.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the hose as claimed could be made by another and materially different process such one including as cutting after shaping rather than before.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. This application contains claims directed to the following patentably distinct species:
  - A: partial curing;
  - B: excluding partial curing.

The species are independent or distinct because they represent mutually exclusive embodiments of the invention.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-4, 7-9 and 12-19 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

5. During a telephone conversation with John DeLong on August 8, 2006 a provisional election was made (presumably) with traverse to prosecute the invention of group I, species B (excluding partial curing), claims 1-4, 6-9 and 12-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5, 10 and 11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected species/invention.

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6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Claims 8 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, no antecedent has been established for "said braided polyester".

In the last line of claim 12, defining that the weight ratio "should be" in a certain range is indefinite as it is not clear if this is a required limitation.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-4, 6-9, 12-15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over at least one of [Ainsworth et al. (US 2002/0171175) and the admitted state of the prior art] taken in view of at least one of [Kemper (US 5,683,773) and Bhattacharyya (US 6,142,189)] and further in view of Pelton (US 5,654,099).

Ainsworth et al. discloses a method for manufacturing a curved hose including forming a hose assembly including inner and outer elastomer layers with an intervening reinforcement layer formed of materials including polyester followed by cutting, shaping and curing (esp. paragraph [0027]). The admitted state of the prior art (esp. page 1, lines 15-22 and page 5, lines 24-28) provides a similar disclosure evidencing that the basic claimed method for manufacturing a curved hose as claimed as well as use of polyester reinforcement represent known and typical expedients in this art. These disclosures thus evidence that the basic claimed method is known and typical in this art in forming curved hose but they do not specifically suggest halogenated polyolefin rubber for the inner layer and an RFL adhesive comprising chlorosulfonated polyethylene rubber on the reinforcement as claimed.

Kemper (e.g. col. 1, lines 10-33; col. 3, lines 3+ and figs.) and Bhattacharyya (esp. col. 1, lines 42-55) suggest an understanding in this art that chlorosulfonated polyethylene and chlorinated polyethylene are known to have significant benefits in use as the elastomer material in hoses used for example in automotive applications, it being considered to have been obvious to adopt such for the inner elastomer layer in either

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primary reference in view of these teachings. As to the claimed RFL adhesive, Pelton is directed to RFL adhesives for bonding polyester reinforcing material to chlorosulfonated polyethylene, this reference evidencing the "common practice" of treating the reinforcing material with an RFL latex dip to enhance bonding to the rubber material (col. 1, lines 19-25) and teaching that when bonding polyester to chlorosulfonated polyethylene, it is desirable to use an RFL adhesive comprising chlorosulfonated polyethylene to enhance bonding (e.g. col. 2, lines 30-40). To use an RFL adhesive comprising a chlorosulfonated polyethylene as claimed to enhance bonding of a polyester reinforcing material to the desirable chlorosulfonated polyethylene rubber would therefore have been obvious.

As to the dependent claims, braided or spiraled reinforcement are suggested by both primary references (paragraph [0027] of Ainsworth et al.; page 5, lines 24-28 of the admitted state of the prior art) as required by claims 2-3. As to claim 4, polyester bonded to an RFL adhesive as claimed is obvious as already noted. As to claims 6-7, Ainsworth et al. (e.g. paragraph [0029]) and the admitted state of the prior art (page 1, line 18) suggest that the hose need not be precured and further these references do not seem to indicate that end-capping is required, omission of such being therefore obvious if desired. As to claim 8, although Pelton suggest that use of an isocyanate pre-dip is *preferred* (col. 3, lines 35+) due to the low surface reactivity of polyester, it does not indicate that this is *required* - omission of such would therefore have been obvious albeit at an expected reduction in bonding. Further, it is apparently also known to use pre-dip materials other than isocyanate (e.g. Pelton col. 1, lines 25-30), not treating with

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an isocyanate in favor of another pretreatment being therefore an obvious alternative. As to claim 9, steam curing is well known and conventional in the curing of rubber, it being considered obvious to cure with such as claimed - note also Ainsworth et al. suggest curing in any conventional means including an autoclave (paragraph [0033]), such being extremely well known to commonly use steam heating. As to claim 12, the latex/RF ratio taught by Pelton is consistent with the claim range (e.g. col. 3, lines 60-65; col. 4, lines 63-64). As to the weight percent of the RFL in the adhesive, Pelton does not suggest particular limits on this, it being considered to have been well within the routine optimization skill of the ordinary artisan to determine appropriate levels of solids in the adhesive for use in the dipping for only the expected results, particularly given that the artisan is apparently well versed with applying RFL type adhesives to rubber reinforcing materials. As to claims 13-15, note again that chlorinated polyethylene and chlorosulfonated polyethylene are suggested by Kemper and Bhattacharyya. As to claim 18, each primary reference suggests shaping using a shaped mandrel. As to claim 19, the RFL of Pelton is not described to include zinc.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over at least one of [Ainsworth et al. (US 2002/0171175) and the admitted state of the prior art] taken in view of at least one of [Kemper (US 5,683,773) and Bhattacharyya (US 6,142,189)] and further in view of Pelton (US 5,654,099) as applied above, and further in view of Tyson (US 2002/0079608).



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To perform the initial hose assembly on a mandrel would have been obvious in view of Tyson which suggests such allows production of higher working pressure hoses - note esp. paragraph [0013].

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over at least one of [Ainsworth et al. (US 2002/0171175) and the admitted state of the prior art] taken in view of at least one of [Kemper (US 5,683,773) and Bhattacharyya (US 6,142,189)] and further in view of Pelton (US 5,654,099) as applied above, and further in view of Freeman (US 2,525,662) or Aymami et al. (US 2,984,262).

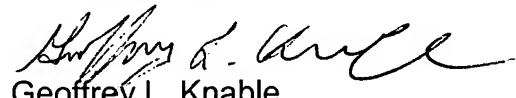
As to claim 17, although the primary references seem to suggest vulcanizing in a pressure chamber, it is apparently known and conventional to mold/cure reinforced hoses using a heated press - Freeman (esp. col. 1, lines 10-24) and Aymami et al. (esp. col. 1, lines 20-36) - curing in a press is therefore considered to have been an obvious alternative.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
August 11, 2006